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R. B. SELIGMAN

C80— 02270

DISCLOSURES UNDER CONSIDERATION

Phillip Morris Incorporated
Privileged and Confidential

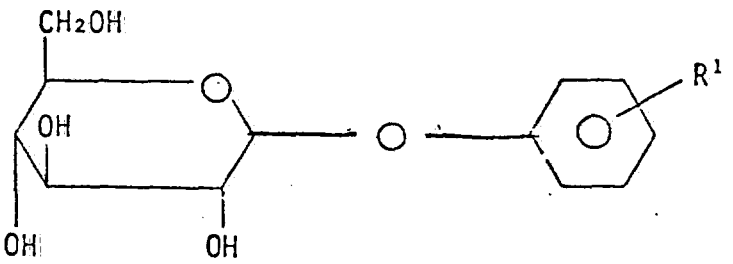
21 April 1980

Code 1 - Offensive/Urgent
Code 2 - Defensive/Urgent
Code 3 - Offensive/Normal
Code 4 - Defensive/Normal

787 USE OF PHENOLIC GLYCOSIDES AS FLAVORANTS IN TOBACCO

E. Sanders/R&D/Chemical Research/Osdene

Compounds having the formula:



are added to tobacco in the range of about 0.02 - 0.5%. On smoking, said compounds pyrolyze between about 250 - 350°C to release the desired phenol as the only volatile product. The phenolic glycoside tobacco flavorants disclosed herein are particularly advantageous in that they are odorless and can be used in any desirable amount withou adversely affecting pack aroma.

D&O/Hutcheson
CODE 4

7-21-77	Disclosure received.
9-19-78	Disclosure to D&O for evaluation.
10-78	Search received from D&O.
3-79	Further development work being done by inventor.
9-79	Synthetic routes are being developed according to the inventor.
1-25-80	Inventor believes sufficient information is available to prepare application.
3-11-80	Search results sent to inventor for review.
3-14-80	Inventor will redraft disclosure and resubmit to Depaoli for application preparation.

1000779422

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

795 MICROWAVE/GAS CHROMATOGRAPHY

D. Watson/R&D/Analytical Research/Bourlas/Lowitz/Farone

Microwave energy source selectively vaporized components for further separation by GC.

Related to 794

Blish
CODE 4

10-24-77	Disclosure received.
2-78	Search sent to inventor for review.
12-78	Inventor has asked that this case not be prosecuted pending his further investigations of the method, possibly should be inactivated.
3-79	Inventor preparing new disclosure.

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796 BIOSYNTHESIS OF A TOBACCO FLAVORANT OR TOBACCO SMOOTHER--FERMENTED TOBACCO

B. Semp, D. Teng, and S. Tenhet/R&D/Biomaterials/O'Donohue/Lowitz/Farone

Organisms obtained from fermented tobacco are transferred into sterile tobacco extracts and by employing various fermentation techniques, flavorants similar to those present in fermented tobacco are produced. These flavorants may then be applied to various tobacco materials to enhance or enrich their subjective organoleptic characteristics.

Hutcheson
CODE 2

10-28-77	Disclosure received.
8-78	Preliminary search completed on PM data base.
3-79	Experimental work underway.
9-6-79	Additional art found on "accelerated fermentation" and forwarded to inventors. Similar concepts disclosed in US 516778 and 1262622.
9-10-79	Memo to inventors reviewing prior art.
9-79	Search requested from outside firm.
10-15-79	Search received; results under evaluation; report to be written.

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1000279423

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

800 COLOR AND ODOR REMOVAL FROM UNCURED TOBACCO

B. Semp and D. Teng/R&D/Biomaterials/O'Donohue/Lowitz/Farone

Green tobacco is treated with a lipase enzyme to remove lipids. The green odor is eliminated and smoking quality improved.

Hutcheson
CODE 2

11-10-77	Disclosure received.
8-78	Preliminary search completed on PM data base.
3-79	Experimental work completed.
9-11-79	Search requested from outside firm.
10-15-79	Search received; results under evaluation; report to be written.

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816 COPOLYMER POSSESSING WATER AND/OR ETHANOL SOLUBILITY FOR MAKING SMOKING COMPOSITIONS

W. Johnson, Jr. and H. Grubbs/R&D/Chemical Research/Sanders/Osdene

Monomers of flavor-release polymers are mixed with monomers containing polar groups and copolymerized to give a copolymer which possesses water and/or ethanol solubility. Typically the copolymerizations are carried out in bulk using free radical catalysts. Smoking compositions are treated with the polymers by spraying or by incorporating in reconstituted tobacco.

Hutcheson
CODE 2

3-2-78	Disclosure received.
8-78	Discussed with inventors.
3-79	Awaiting completion of example work and smoking data.
8-79	Inventors indicate experimental work is proceeding and subjective evaluation should be completed by the end of the year.
1-24-80	Experimental work completed.
3-11-80	Requested guidance from Dr. Sanders in obtaining necessary information to prepare application.
4-15-80	Inventor Grubbs will organize available data so that we can proceed.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

834 IMPROVED FLAVOR FOR RECONSTITUTED TOBACCO

D. Keel/R&D/Flavor Development/Daylor/Meyer

In the manufacture of reconstituted tobacco by the paper-made process, in which the solubles are concentrated and returned to the sheet, it was found that heating the concentrated solubles with or without additives to a temperature of about 175 degrees F for a period of about 30 to 60 minutes or less before recombination with the sheet resulted in an improved flavor of the product making it more tobacco-like. This pasteurization process results in a darker colored sheet, more desirable flavor, and prevents souring or solidifying of the concentrated solubles or viscosity build-up before recombination.

Hutcheson
CODE 2

5-17-78	Disclosure received. Close art in US 720830 to Marsden who heats tobacco extract to 250 degrees C or higher.
7-17-79	Art sent to inventor--examples requested.
8-23-79	Asked inventor to organize presently available data and examples for evaluation.
11-20-79	Discussed with inventor and he hopes to submit representative examples in the next month.
12-7-79	Inactivated.
2-12-80	Reactivated--Following meeting with inventor a memo was sent requesting specific subjective evaluations.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

835 IMPROVED FLAVOR FOR RECONSTITUTED TOBACCO

D. Keel/R&D/Flavor Development/Daylor/Meyer

In the manufacture of reconstituted tobacco by the paper-made process, in which the solubles are concentrated and returned to the sheet, it was found that the addition of ammonia to the solubles either with or without heat and/or with or without other additives before recombination with the sheet resulted in an improved flavor of the product making it more tobacco-like.

Related to 834.

Hutcheson
CODE 2

5-17-77	Disclosure recieved.
11-7-77	Search requested.
11-22-77	Search completed.
7-17-79	Art sent to inventor--examples requested.
8-23-79	Asked inventor to organize presently available data and examples for evaluation.
11-10-79	Discussed with inventor and requested experimental and smoking data.
12-7-79	Inactivated.
2-12-80	Reactivated--Following meeting with inventor a memo was sent requesting specific subjective evaluations.

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836 BONDING OF POLYPROPYLENE WRAP TO ITSELF BY LASER IRRADIATION

W. Farone, A. Lilly, Jr., P. Martin, and W. Claflin/R&D/Applied Research/Physical Research/Kassman/Lowitz/New Products/Meyer

Techniques for bonding two sheets together at high speed using focussed (2 focal length) CO_2 laser beam. Bonded area around 0.008 diameter. with reflecting foil beneath the wraps speed for bonding was 590 feet/minute with 40-60 watts power.

Sarofeen
CODE 1

5-23-78	Disclosure received.
7-12-78	Search requested from outside firm.
7-28-78	Search received--sent to Farone for evaluation. Final disclosure details expected following testing.
11-1-78	Meeting with Farone et al--special laser has to be ordered.
8-79	Testing now in progress.
11-19-79	Laser has been received and testing is active.
1-24-80	Memo to Farone indicating that work is progressive.
4-12-80	Farone states work is still proceeding--waiting for further details.

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1000729426

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

840 METHOD FOR REDUCING CO DELIVERY IN NONFILTERED CIGARETTES

R. Ikeda/R&D/New Products/Meyer

A cigarette is made with a wrapper selected to pass through it gases of specific molecular size. Ducts are provided for passing a maximum of the smoke volume contiguously to the wrapper to maximize transfer of the said gases through the paper. Small gas molecules exit into the ambient air and out of the smoke stream prior to entering the smoker's mouth.

Sarofeen
CODE 4

6-23-78	Disclosure received.
	Awaiting tests by inventor to develop method.
	Close art.
	New disclosure to be submitted by Ikeda and Houck.
8-30-79	Talked with Houck--project still alive but the way to go with the construction is still being determined.
4-14-80	Waiting for further details.

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844 PROCESS FOR CHEMICALLY PULPING TOBACCO MATERIALS FOR SHEET MAKING

A. Keller and G. Bokelman/R&D/Tobacco Materials/Burns/Gannon

Burley stems are extracted with water, then subjected to a short period of reflux in about 25% aqueous potassium hydroxide solution. The stems are next washed and subsequently treated with steam at about 115 psi and 167 degrees C for a few minutes. The stems may then be adequately defibrilated merely by gentle stirring; i.e., without any mechanical refining. Long, thin fibers, which cannot be made by mechanical refining are produced by this invention.

Hutcheson

INACTIVE

8-1-78	Disclosure received.
8-11-78	Preliminary search results sent to inventors.
3-79	Comparative studies underway.
11-19-79	Results in Annual Report are being assessed to determine whether to proceed with application.
1-25-80	Inactivated due to close prior art.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

849 POLYMERS FOR IMPROVING FLAVOR AND AROMA OF SMOKE

H. Grubbs, T. Van Auken, and W. Johnson, Jr./R&D/Chemical Research/Sanders/Osdene/Physical Research/Kassman/Lowitz/Farone

Polymers of unsaturated aliphatic, aromatic carbonates can be prepared in ways similar to the preparations of unsaturated aliphatic, aliphatic carbonates as disclosed in 687. These polymers, when added to cigarette filler, on smoking liberate phenolics to the smoke stream, which improve the flavor and aroma of the smoke.

Spin-off of 687.

Hutcheson
CODE 3

9-29-78	Disclosure received.
11-6-78	Examples being prepared; synthetic process under development.
9-4-79	Subjective smoking results to be generated to complete project.
1-24-80	Subjective smoking results not yet available.
3-12-80	Memo to Sanders requesting guidance in dealing with this disclosure.
3-18-80	Memo to inventors requesting examples and smoking data.

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850 POLYMERS OF NICOTINE AND NICOTINE ANALOGUES

W. Johnson, Jr./R&D/Chemical Research/Sanders/Osdene

Polymers of nicotine analogues and of nicotine itself, which possess carbonate or ester linkages, are to be prepared from suitable substituted nicotines via condensation reactions. The polymers would consist of nicotine moieties, moieties of substituted nicotines joined by ester linkages or of nicotinic esters that have been condensed with appropriate diols, which may or may not be nicotinic in character but which in combustion and/or pyrolysis will yield nicotine and products that do not adversely affect cigarette smoke.

Hutcheson
CODE 4

9-29-78	Disclosure received.
11-6-78	Search completed--to inventor for review. Awaiting more definitive information and examples.
9-4-79	Project in preliminary stage.
1-25-80	No experimental data available.
3-12-80	Memo to Sanders requesting assistance in dealing with this disclosure.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

851 SOLANESOL ANALOGUES AND ESTERS THEREOF FOR APPLICATION TO CIGARETTE FILLER

W. Johnson, Jr., H. Grubbs, and G. Chan/R&D/Chemical Research /Sanders/ Osdene

Solanesol analogues and esters thereof are to be applied to cigarette filler and smoked. Improved subjective reponse should result. The efficacy should optimize in those cigarettes whose tar deliveries are low, i.e., below 9-10 mg when smoked by standard machine methods.

Hutcheson
CODE 4

9-29-78	Disclosure received.
3-79	Methods for preparing compounds being developed.
9-4-79	Project in preliminary stage.
1-25-80	Experimentation to make compounds still underway.
3-12-80	Memo to Sanders regarding this disclosure—will meet with inventors to discuss.

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856 ELECTRON BOMBARDMENT FOR CONTROLLING BEETLE INFESTATION

R. de la Burde/R&D/Tobacco Materials/Burns/Gannon

Related to earlier Laszlo case.

Palmer
CODE 4

10-18-78	Disclosure received.
10-20-78	Awaiting further data.
1-14-80	No further results to be expected--Burde.
2-8-80	Memo from Gannon re status; 2-12-80 Palmer reply.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

860 NOVEL FILTER FOR DELIVERY OF MAXIMUM FLAVOR

D. Keel and W. Bell/R&D/Flavor Development/Daylor/Meyer

Filter that contains a tube(s), or components that fit together to form a tube(s), in a matrix of filter tow or a solid (or foam) rod by which a portion of raw, unfiltered smoke can be delivered to the mouth of the smoker with a volume of air dilutin provided by means of perforation or porosity of the tipping paper with or without flutes, bumps, or other known means.

Inskeep
CODE 2

12-1-78	Disclosure received.
5-7-79	Have only subjective data, expect analytical results soon.
12-6-79	Information received from Keel, more expected.
2-29-80	Panel results etc. maybe in 2 weeks; possibly more later.
3-21-80	Note to inventors about results.

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1000279430

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

865 REDUCED DELIVERY SMOKING PRODUCT

B. Semp and D. Teng/R&D/Biomaterials/O'Donohue/Lowitz/Farone

Microbial treatment of a tobacco extract followed by recombination with the fibrous portion of the tobacco produces a cigarette material that yields less HCN and CO. Additionally the TPM of the treated versus untreated also show reductions.

Related to 810 and 838.

Hutcheson
CODE 1

12-21-78	Disclosure received.
6-29-79	Disclosure sent to WLKT for evaluation in view of prior filings of 810 and 838.
7-17-79	Letter to WLKT re how to proceed.
9-79	Search requested from outside firm.
9-5-79	Development work in the pilot plant may result in additional filings in this area--no definitive data at this time.
10-15-79	Search received.
11-6-79	Discussed in depth with inventors and T. Gillis; determined that additional experimental data is necessary to define optimum limits of operation for achieving best gas phase reduction.
4-3-80	Note to files recommending moving this disclosure forward as soon as possible; Lowitz/Farone concur.

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875 RECONSTITUTED TOBACCO SHEET

R. Uhl and G. Gellatly/R&D/Tobacco Materials/Burns/Gannon

A process for producing a reconstituted tobacco sheet by wet forming on a paper making device except that a high bulk sheet is obtained by eliminating sheet compression due to mechanical pressing to remove water and by eliminating sheet ironing due to drying on a heated cylinder.

Inskeep
CODE 2

2-14-79	Disclosure received.
8-9-79	Identical disclosure 889 combined herewith.
11-27-79	Progress report being written.
2-29-80	Progress report written--waiting approval.

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1000729431

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

879 PRODUCTION AND USE OF REACTION FLAVORS FROM YEAST HYDROLYSATE AND SUGARS

B. Semp, L. Wu, and J. Swain/R&D/Flavor Development/Daylor/Meyer/Biomaterials/O'Donohue/Lowitz/Farone

Reaction flavors for smoking products are disclosed. The flavors are prepared by reacting reducing sugars and selected hydrolysates of single-cell protein optionally in the presence of an aldehyde in an essentially solvent-free system. The thus prepared flavors may be incorporated into smoking compositions including tobacco, reconstituted tobacco, non-tobacco substitutes or mixtures thereof.

Hutcheson
CODE 2

3-20-79	Disclosure received.
4-80	Spoke with inventor Wu, and she will submit the necessary experimental data.

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880 USE OF B-DIKETONES TO FORM DIHYDROPYRIDINES AND PYRIDINES

F. DeBardeleben/R&D/Chemical Research/Sanders/Osdene

Pyridines and dihydropyridines are synthesized from B-diketones. For example, reaction of acetylacetone with ethyl B-amino crotonate would generate 2,4,6-triethyl nicotinic acid and 2,4,6-trimethyl nicotinates.

Hutcheson
CODE 4

3-23-79	Disclosure received.
9-20-79	Search by TPI requested. TPI awaiting input from Dr. DeBardeleben before search is conducted.
3-17-80	Memo to inventor asking him to supply information to TPI for search.

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1000729432

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

882 USE OF TRANS 2-PENTENAL TO GENERATE THE PYRIDINE RING

F. DeBardeleben/R&D/Chemical Research/Sanders/Osdene

Synthetic routes for preparing nicotine analogues are disclosed wherein the pyridine ring is generated by reacting trans 2-pentenal with, for example, 3-amino crotonate. Various 2,4-dialkyl-nicotines may be prepared.

Hutcheson
CODE 4

3-23-79	Disclosure received.
9-20-79	Search by TPI requested. TPI awaiting input from Dr. DeBardeleben before search is conducted.
3-17-80	Memo to inventor asking him to supply information to TPI for search.

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885 APPLICATION OF TOBACCO ADDITIVES TO CIGARETTE WRAPPERS

J. Seeman and H. Spielberg/R&D/Chemical Research/Sanders/Osdene/Flavor Development/Daylor/Meyer

The proposal is to incorporate the additive to the cigarette paper, either by passing the paper through a solution of the additive(s) in a easily removable solvent or by incorporating the additive to the paper matrix during the paper manufacture.

Hutcheson
INACTIVE CODE 2

4-4-79	Disclosure received.
3-79	Preliminary search completed.
1-25-80	Inactivated on basis of prior art.

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888 DEVICE FOR THE MODIFICATION OF THE RATE OF DELIVERY OF TOBACCO SMOKE COMPONENTS

G. Forrest and G. Vilcins/R&D/Analytical Research/Bourlas/Lowitz/Farone

Device for the modification of the rate of delivery of tobacco smoke components based on the transient retention of the component by the device. Retention must be on the order of the time between puffs.

Blish

4-24-79	Disclosure received.
11-79	Assigned to Blish.
4-2-80	Inventors interviewed.

1000779433

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

892 LASER DISCLOSURES

S. Spiers, W. Smick, D. Brookman, E. Grollimund/Manufacturing Engineering/ Kay/Pasquine

A compilation of ideas from several cooperating individuals which, in composite, result in a bobbin feed and driving method which makes high perforating speeds possible on a laser perforating machine. The ideas in this file will be separated into individual cases or be combined or joined in other disclosures for bobbin drives.

Related to 892A, 892B, 911A, 911B, Malaucene

Sarofeen
CODE 2

5-2-79 Disclosures received.

8-23-79 This group of disclosures was filed under the generic number PM 892 and had for a purpose to make an interim record of improvements in Malaucene paper perforating accessory equipment prior to possible viewing during a visit by a Malaucene technologist. These disclosures were passed on to WLK&T in due course in the abbreviated form in which written and a meeting was scheduled for George Brandt to visit and inspect these disclosures and the installation comprising the inventions. Referring to the cover sheet in this folder listing disclosures 1 through 11, the status is as follows: (1) Grollimund -large windup drum and paper path change: this is now incorporated in PM 900 and 911; (2) This listed item is not found in the group of sheets in this folder, but has already been filed upon in the name of Ed Stultz as inventor in a separate case; (3) Not acted on as yet; (4) Not acted on as yet; (5) Not acted on as yet; (6) Ev Grollimund is modifying and expanding the technique of align ment talked about herein and may submit another disclosure; (7) Not acted on as yet; (8) Not acted on as yet; (9) Not acted on as yet; (10) Not acted on as yet; and (11) Not acted on as yet. I expect to confer with George Brandt to get his judgement on how the cases marked "not yet acted on" above should be categorized.

1-24-80 Discussions with Brandt lead to a conclusion that the 11 disclosures listed above will result in filing 4 cases. These will be advanced as time permits.

2-80 PM 952 divided out of this case.

4-14-80 Draft applications for 911A, 911B, 892A, and 892B returned to WLKT.

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1000779434

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

894 USE OF PIPERAZINES AS FLAVORANTS AND/OR COOLING COMPOUNDS

W. Edwards and Y. Houminer/R&D/Chemical Research/Sanders/Osdene

Tobacco flavorant and/or cooling compounds selected from 1,4-disubstituted pyrazines and alkylpiperizines wherein the 1,4-substituents are acyl, sulfonyl and carbamido are disclosed.

Hutcheson
CODE 4

5-7-79	Disclosure received.
11-20-79	Experimental and synthesis work completed; analytical smoking data will be obtained in the near future.
3-14-80	Sanders indicated that the work was near completion. A draft should be ready shortly.

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895 1,2- AND 1,4-DIHYDROPYRAZINES (I, II) AS FLAVORANTS AND/OR COOLING COMPOUNDS

W. Edwards and Y. Houminer/R&D/Chemical Research/Sanders/Osdene

Tobacco flavorant and/or cooling compounds selected from 1-substituted-1,2-dihydropyrazines and 1,4-disubstituted dihydropyrazines wherein the 1- and 4-substituents are acyl, sulfonyl and carbamido.

Hutcheson
CODE 4

5-7-79	Disclosure received.
11-20-79	No experimental or synthesis data available at this time.
3-80	No data available for draft purposes at this time.

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896 FLAVOR-RELEASE AGENTS ON TOBACCO

W. Johnson, Jr. and H. Grubbs/R&D/Chemical Research/Sanders/Osdene

Polymeric sulfur release flavorant compounds are disclosed as being useful in smoking products. Processes for their preparation and use on tobacco are detailed.

Hutcheson
CODE 4

1000779435

5-8-79	Disclosure received.
9-5-79	Preliminary synthesis work underway.
1-24-80	Synthetic work completed; subjectives to be done in near future.
3-14-80	Data to be submitted by inventors as soon as possible.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

897 SYNTHESIZING PYROLYTIC PRECURSORS TO PRODUCE ALDEHYDIC-TYPE FLAVORANTS

M. Bourlas and H. Grubbs/R&D/Chemical Research/Sanders/Osdene/Analytical Research/Bourlas/Lowitz/Farone

Polymeric flavorants release compounds having controlled thermal decomposition properties producing aldehydic-type flavorants on combustion are disclosed. Prior to smoking, the compounds are non-volatile and non-migratory.

Hutcheson
CODE 2
5-7-79 Disclosure received--lacks detail.
9-4-79 Preliminary synthesis of monomers underway.
1-25-80 Examples prepared for subjective evaluation.
3-80 Inventors hope to complete this project by the end of August.

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898 COMPOUNDS CONTAINING THE BASIC ELEMENTS OF THE NICOTINE MOLECULE

W. Edwards and J. DeBardeleben/R&D/Chemical Research/Sanders/Osdene

Nicotine analog with fixed geometry through attachment of the N-methyl to the 2-position of the pyridine ring. Alkylated or arylated equivalents.

Inskeep
CODE 4
5-10-79 Disclosure received.
9-79 Progress will be reported by inventors.
3-25-80 Alternative of publishing being investigated.

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899 METHYL-PYRIDO-AZABICYCLO-OCTANE AND ALKYL-SUBSTITUTED ANALOGUES

J. Seeman and C. Chavdarian/R&D/Chemical Research/Sanders/Osdene

Nicotine analog with fixed geometry through methylene bridging from 5' to 2. Alkylated homologs.

Related to 893.

1000779436

INACTIVE Inskeep
CODE 4
5-15-79 Disclosure received
11-20-79 Awaiting hopefully more promising test results.
3-26-80 Note to inventors seeking more information.
4-15-80 May be several months before HPLC results; inactivated.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

902 MEASURING PRESSURE DROP

D. Brookman/Manufacturing Engineering/Kay/Pasquine

A strip of cigarette tipping paper after being perforated is guided over a pressurized port of prescribed area. A positive air pressure is maintained at said port to be available to bleed through the holes in the tipping paper. The pressure drop is measured across the paper to determine the degree of porosity attained.

Related to earlier Stultz case.

Sarofeen
CODE 2

5-17-79	Disclosure received.
9-19-79	This case is similar to Ed Stultz' case, now pending, which differs only in the use of positive air pressure as against Stultz' use of negative air pressure. This case is being held in abeyance pending first Office Action on the Stultz case.
4-17-80	Take up with John Torrente for preparation.

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905 REORDERING OF DIET

C. Hoelzel/R&D/Physical Research/Kassman/Lowitz/Farone

A method of reordering expanded tobacco wherein fully reordered tobacco is mixed with freshly expanded tobacco prior to entering the reordering cylinder. From the reordering cylinder the mixture is sent to a bulking silo (first in-first out type) from which a portion is removed at the exit for use in the "fully reordered" tobacco mentioned above.

Inskeep
CODE 1

3-21-79	Disclosure received.
6-79	Preliminary search completed--sent to inventor for review.
6-22-79	Inventor's comments received.
7-2-79	Discussed with Farone--awaiting test results.
1-23-80	Considering disposition: Hoelzel.
4-15-80	Note to Kassman suggesting need for action. No prospect of pilot plant test to verify this invention.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

909 QUALITY CONTROL METHOD

R. Creamer/Chemical Research/Kassman/Lowitz/Farone

Light absorption, rather than more usual scattering, is applied to smoke aerosol to study variations within a puff or from puff to puff.

Blish
CODE 4

7-22-79	Disclosure received.
7-23-79	Sent to Osdene/Johnson for recommendations/comments.
11-27-79	Sent to Sanders for comment; in-house search completed.
1-4-80	Sent to Kassman for comment.

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910 COOLING VACUUM PUMPS BY AIR FLOW

E. Grollimund/Manufacturing Engineering/Kay/Pasquine

A system for maintaining laser vacuum pump temperature levels within safe operating limits to allow for elimination of down time due to pump overheating. Also increases pump life and contributes to more even power output from laser.

INACTIVE Sarofeen

8-6-79	Disclosure received.
11-19-79	This disclosure was made for record purposes in view of disclosure to the supplier of the laser unit.
3-6-80	Inactivated.

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1000729438

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

915 MEANS FOR REDUCING SPHERICAL ABERRATION IN A LENS

D. Lowitz/R&D/Applied Research/Farone

This is directed to facilitate micro images with a CO2 laser perforator which produces an invisible beam, or to generally focus invisible beam laser. When using a lens to focus a laser beam, a second or additional element may be provided that is essentially a lens element in its basic construction, but which does not have any center portion. Because lens elements of a finite size and thickness normally introduce spherical aberration, such an additional element that does not have a center region of material can be used together with the primary lens element to modify the effective focal length of the outer portion of the primary lens and to make it equal to the center portion of the primary lens, and thereby eliminate sperical aberration and permit focusing to a spot.

Sarofeen
CODE 2

8-27-79	Disclosure received--inventor notified.
9-5-79	Disclosure assigned to Sarofeen.
11-20-79	Inventor is preparing technical data.
1-24-80	No further material received to date.
4-14-80	Inventor considering advanced design.

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916 CIGARETTE FILTER

J. Lephardt/R&D/Analytical Research/Bourlas/Lowitz/Farone

A ventilated filter with tow compressed toward axis at the zone of ventilation to disperse smoke better across the filter.

Inskeep
INACTIVE CODE 1

8-28-79	Disclosure received--inventor notified.
9-5-79	Disclosure assigned to Inskeep.
9-20-79	PM data base search completed.
1-24-80	No work contemplated.
2-11-80	Inactivated per Bourlas.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

917 CIGARETTE FILTER

J. Lephardt/R&D/Analytical Research/Bourlas/Lowitz/Farone

A ventilated plug-space-plug filter wherein the space contains a conical baffle and is positioned at the ventilation zone. Air-smoke mixing is favored.

Inskeep

INACTIVE CODE 1

8-28-79	Disclosure received--inventor notified.
9-5-79	Disclosure assigned to Inskeep.
9-20-79	PM data base search completed.
1-24-80	No work contemplated.
2-11-80	Inactivated per Bourlas.

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918 INERTIAL FRICTION DRIVE CONVEYOR CHAIN SYSTEM

M. Slovic/Stemmery

A system for conveying palleted or flat sided materials such as load containing boxes. The basic component is a roller or slide chain comprising a top mounted roller in an upwardly projecting lug. The chain is driven preferably in a channel guide. The load bearing upwardly projective lugs receive the load on a lug mounted roller. the weight of the load pressing against the upper rollers causes it to move with the chain supported on the rollers. An impediment to the movement of the load such as a stop at the end of desired travel causes the chain to underide the stopped portion of the load while continuing to advance other portions of load along the chain lengths.

Sarofeen

8-29-79	Disclosure received--inventor notified.
9-5-79	Disclosure assigned to Sarofeen.
9-12-79	Search requested from outside firm.
10-8-79	Search received--sent to inventor for review.
11-20-79	Search results show very close art.
1-24-80	Due to be inactivated.
4-14-80	Inventor is considering possible points of novelty.

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10007940

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

922 HIGH STRENGTH RECONSTITUTED TOBACCO SHEET WITHOUT NON-TOBACCO ADDITIVES

G. Gellatly, J. Baggett, G. Wilkinson, G. Jenkins/R&D/Tobacco Materials/Burns/Gannon

Simple sheet making process to minimize processing steps and capital expenditure. Tobacco materials are pressurized with steam for about 1 hour and the pressure released rapidly. This disintegrates the structure of the tobacco to a paste. This paste can then be cast into a sheet or formed by paper making techniques into a sheet of superior strength to other known processes.

Inskeep

10-79	Disclosure received - inventor notified.
11-79	Assigned to Inskeep.
3-31-80	Work by inventors is progressing.

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925 NWA IMPROVEMENTS

W. Nichols/R&D/Cigarette Development/Meyer

Sarofeen

9-14-79	Disclosure logged in - inventor notified.
1-24-80	One case (PM 914, Gergely) based on these improvements has been filed.
4-14-80	Awaiting further disclosures and developments.

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926 CHEMICAL STRUCTURES WHICH FACILITATE TRANSPORT OF MATERIALS ACROSS BILAYERS

J. Lephardt/R&D/Analytical Research/Bourlas/Lowitz/Farone

Inskeep

9-26-79	Disclosure received - inventor notified.
10-31-79	Assigned to Inskeep.
1-10-80	Search requested from outside firm.
2-21-80	Search received--to inventor for review.
3-31-80	Inventor sees no direct anticipation; will am for an example.

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1000779441

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

927 FILTER

H. Maxwell/R&D/Flavor Development/Daylor/Meyer

Filters were made using triethyl citrate (TEC) as plasticizer. TEC was applied at 2.5, 5.0, 7.5, and 10% of filter tow weight. Control filters were made with 10% triacetin plasticizer. The filters were attached to mentholated cigarette rods and subjected to aging study.

Inskeep
10-16-79 Disclosure received - inventor notified.
11-79 Assigned to Inskeep.
4-15-80 Inventor will supply data shortly. Searching here.

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928 PREPARATION OF N-TERT BUTYL-p-MENTHANE-3-CARBOXAMIDE (WS-14)

R. Comes and S. Haut/R&D/Chemical Research/Bourlas/Sanders/Osdene

A one step synthesis from menthyl chloride leading to a pure WS-14 in a shorter period of time with a comparable yield.

Hutcheson
10-22-79 Disclosure received - inventor notified.
10-31-79 Assigned to Hutcheson.
11-9-79 Search conducted by TIF in 1978 sent to inventors for evaluation.
1-25-80 Awaiting information from possible inventor Van Auken.
3-17-80 Memo to inventors asking for any new data; 4-80 inventors indicated that data will be ready soon.

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932 RESOLUTION OF RACEMIC MENTHOL

S. Haut/R&D/Chemical Research/Sanders/Osdene

Inskeep
10-31-79 Disclosure received - inventor notified.
1-21-80 Assigned to Inskeep.
3-31-80 Sanders indicates low priority.

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1000279442

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

933 SPIRAL-WOUND PACKED BED REACTOR

H. Bravo/R&D/Biomaterials/O'Donohue/Lowitz/Farone

The invention involved a spiral-wound packed bed reactor consisting of a tube containing a flexible foam which may be smooth or contain indentions. On this foam are adhered segmented packets of encapsulated microorganisms which perform specific bio-chemical reactions. The encapsulated cells are segmented to facilitate and control flow rates and prevent compaction.

Hutcheson
CODE 1

11-2-79	Disclosure received - inventor notified.
12-79	Assigned to Hutcheson.
1-8-80	Discussed with inventor and manager. Must investigate prior art before processing.
2-11-80	Inventor to organize data for disclosure.
3-19-80	Met with T. Gillis of WLKT to discuss disclosure and state of the art.

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934 TOBACCO BEETLE CONTROL

H. Bravo/R&D/Biomaterials/O'Donohue/Lowitz/Farone

The invention is a process to kill the symbiotic yeast in tobacco beetles and indirectly kill the larvaes and eggs that the adult beetle might deposit. In this method the tobacco can be sprayed with phosphoric acid to lower the pH. Alternatively, the container in which the tobacco will be stored for maturation can be dipped in phosphoric acid or it could be sprayed with the strong acid before the tobacco is pressed into it. As tobacco or container dries, the pH is further lowered making it impossible for the symbiotic yeast to survive.

Inskeep
CODE 4

11-5-79	Disclosure received - inventor notified.
12-79	Assigned to Inskeep.
3-3-80	Searched here: tobacco + leaf + phosphoric acid.
4-18-80	Further studies complete in about a month.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

935 MATERIALS AND METHOD FOR THE MANUFACTURE OF PELLETS (PI)

H. Bravo/R&D/Biomaterials/O'Donohue/Lowitz/Farone

The invention is a method for producing pellets containing live microbial cells or active enzymes. To make the pellets, the cell or enzyme solution is reacted with celite 545 (filter aid), glutaraldehyde, and polyethyleneimine, which are added sequentially. The end product consists of highly permeable pellets in which the protein on the outer wall of the microorganism or on the enzyme has reacted with the polymeric ingredients added.

Related to 936 and 937.

Hutcheson
CODE 2

11-5-79	Disclosure received - inventor notified.
12-79	Assigned to Hutcheson.
1-8-80	Discussed with inventor and manager. Must investigate prior art before processing.
3-5-80	State of the art search requested of TPI and Gillis; review papers sent to inventor for review.
3-19-80	Meeting with T. Gillis of WLKT to discuss invention and state of the art.
3-21-80	Questions on process to inventor.
3-80	Search efforts continue; TPI preliminary search completed.

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1000279444

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

936 MATERIALS AND METHOD FOR THE MANUFACTURE OF PELLETS (PI)

H. Bravo/R&D/Biomaterials/O'Donohue/Lowitz/Farone

The invention is a method for producing pellets containing live microbial cells or active enzymes. To make the pellets, the cell or enzyme solution is reacted with celite 545 (filter aid), POLY(acrylamide acrylic acid) saturated in ethanol, and polyethylene imine, which are added sequentially. The end product consists of highly permeable pellets in which the protein on the outer wall of the microorganism or on the enzyme has reacted with the polymeric ingredients added.

Related to 935 and 937.

Hutcheson
CODE 2

11-5-79	Disclosure received - inventor notified.
12-79	Assigned to Hutcheson.
1-8-80	Discussed with inventor and manager. Must investigate prior art before processing.
3-5-80	State of the art search requested of TPI and Gillis; review papers sent to inventor for review.
3-19-80	Meeting with T. Gillis of WLKT to discuss invention and state of the art.
3-21-80	Questions on provess to inventor.
3-80	Search efforts continue; TPI preliminary search completed.

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100029445

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

937 SAPONIFIED UNSATURATED FATTY ACIDS

H. Bravo/R&D/Biomaterials/O'Donohue/Lowitz/Farone

The invention is a method for producing pellets containing live microbial cells or active enzymes. To make the pellets the cell or enzyme solution is reacted with celite 545 (filter aid); saponified unsaturated fatty acids i.e. sodium oleate, linoleic acid, linoleic acid, Joy liquid soap, White Dove liquid soap, etc. and polyethyleneimine, which are added sequentially. The end product consists of highly permeable pellets in which the protein on the outer wall of the microorganism or on the enzyme has reacted with the polymeric ingredients added.

Related to 935 and 936.

Hutcheson
CODE 2

11-5-79	Disclosure received - inventor notified.
12-79	Assigned to Hutcheson.
1-8-80	Discussed with inventor and manager. Must investigate prior art before processing.
3-5-80	State of the art search requested of TPI and Gillis; review papers sent to inventor for review.
3-19-80	Meeting with T. Gillis of WLKT to discuss invention and state of the art.
3-21-80	Questions on provess to inventor.
3-80	Preliminary search completed by TPI; papers ordered.

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938 PROTEIN PRECIPITATION ON SEL

H. Bravo/R&D/Biomaterials/O'Donohue/Lowitz/Farone

A process to remove some of the protienaceous components of SEL (tobacco juice). In this method the pH is raised from 5.5 to 8 to insolubilize protein precipitation at its isoelectric pH (least soluble pH of protein). Using 2N KOH to raise the pH, the insoluble solids were increased from 7.73 grams up to 22.78 grams. when in addition to the pH adjustment 10.7 grams $K_2H\ PO_4$/liter of SEL was added, the insoluble solids were increased from 7.73 grams up to 32.83 grams. The solids were separated by centrifugation and decanting of the supernatant. The process may consist only on adjusting the pH to alkalinity or it could involve pH adjustment plus addition of $K_2H\ PO_4$.

Hutcheson
CODE 2

11-5-79	Disclosure received - inventor notified.
12-79	Assigned to Hutcheson.

1000779446

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

939 DENITRIFICATION OF SEL BY FEDBATCH FERMENTATION

H. Bravo/R&D/Biomaterials/O'Donohue/Lowitz/Farone

A process for denitrification of SEL using the fedbatch fermentation process. In this process the cell innoculum and some of the nutrients are introduced first into the fermentor in proportions slightly in excess to that needed to denitrify a full vessel of SEL. The tobacco juice (SEL which has been adjusted to pH 7.3 and autoclaved) is then continuously added at a sufficient rate to fill the fermentor in 12 hours. This process will resemble continuous and batch processes without being either of them. The application of fedbatch to denitrification is new. Fedbatch process has been primarily used in academia. Preliminary results show that fedbatch denitrification could be 1/3 as long as batch denitrification, 8 hours.

Hutcheson
CODE 2

11-5-79	Disclosure received - inventor notified.
12-79	Assigned to Hutcheson.
1-18-80	Prior art search underway.
2-11-80	Inventor to organize data for disclosure.
4-3-80	Note to file advising proceeding; Farone/Lowitz concur.
4-16-80	Memo to inventor requesting specific information on process.

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940 FUME HOOD

R. Kelly/Q A Link

This fume hood comprises a unique ducting system which includes a base scavenging aperture which collects fume-fall vapors. Vapors of heavier than air solvents which exit the front ledge of a fume hood in a waterfall action and frontal spills which result in vapors are suctioned off at the floor level by a duct at the lower front of the hood. The lower duct is connected to the main system.

Sarofeen

11-14-79	Disclosure received - inventor notified.
12-79	Assigned to Sarofeen.
12-20-79	Search received from K&S--to inventor for review.
1-24-80	Request for recommendation of AIP for disposition.
4-15-80	Inventor checking with management on deposition.

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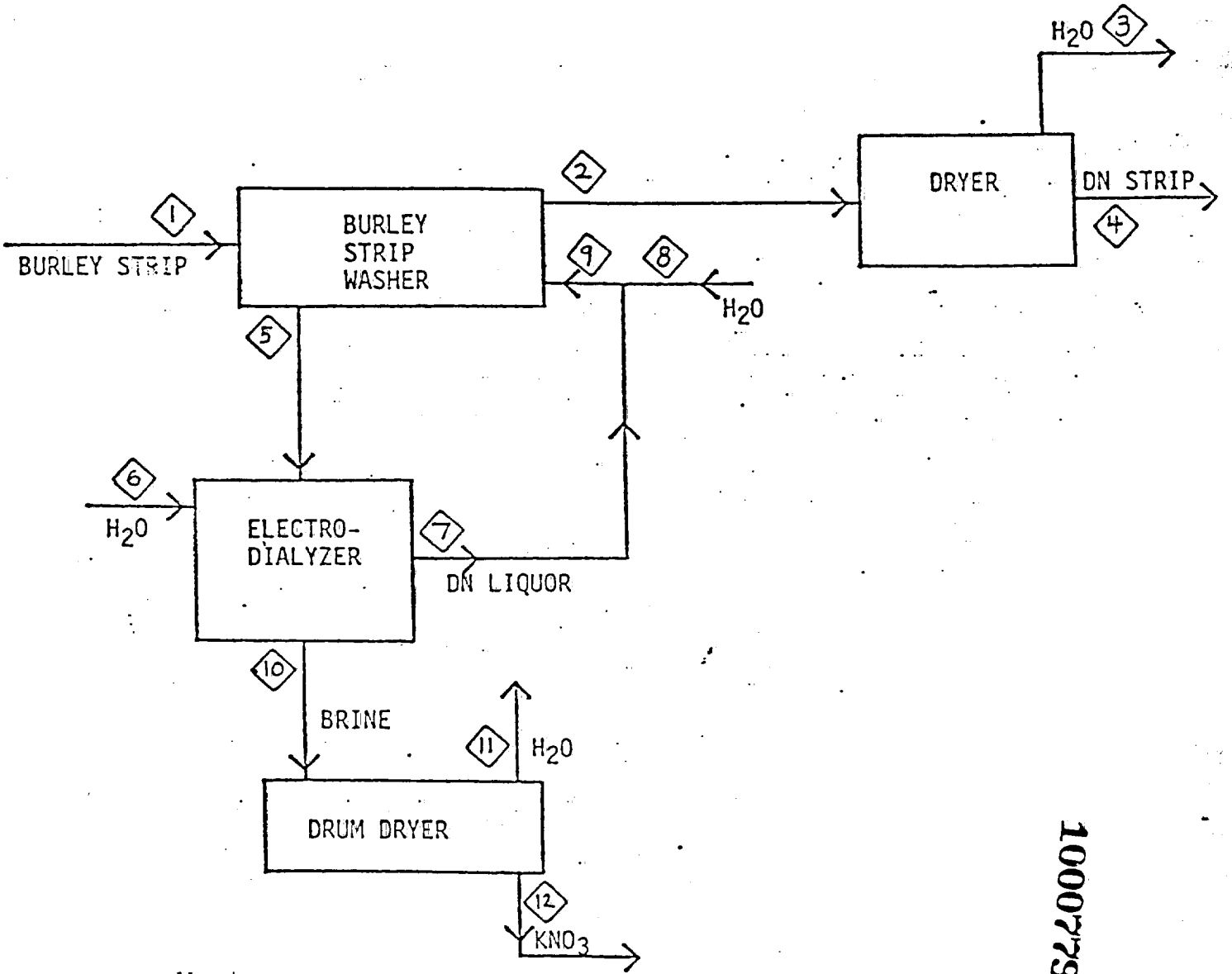
Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

941 EXTRACTION AND DENITRATION OF BURLEY STRIP

S. Muller/R&D/Tobacco Materials/Burns/Gannon

Burley strip enters the washer at the end opposite the press section. The strip is sandwiched between two porous belts and immersed in the extraction medium. Upon exiting the washer, the belts and the strip are passed through a press section to remove excess liquor. Each of the washer's two porous belts has a tensioning device to compensate for changes in length during processing. The washer operates at a continuous wash rate of 200-300 pounds per hour.



Hutcheson

11-20-79 Disclosure received - inventor notified.
1-21-80 Assigned to Hutcheson; discussed with manager.
3-80 Close art found on apparatus aspects of the invention.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

942 COMPOUND TO ADD TO TOBACCO TO PRODUCE NICOTINE UPON SMOKING

W. Chan/R&D/Chemical Research/Sanders/Osdene

Related to 703.

Inskeep
11-21-79 Disclosure received - inventor notified.
12-79 Assigned to Inskeep.
1-2-80 Copy of disclosure sent to Depaoli re PM 703.
3-25-80 Latest information, examples will be forthcoming.

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943 RAPID REORDERING WITH AN APRON DRYER

F. King, Jr. and P. Sherman/Manufacturing Engineering/Taylor/Kay/Pasquine

(1) Rapid reordering is accomplished by spraying a fine mist of water onto the free falling tobacco down stream from the discharge doffer. Tobacco carpet is one leaf thick at this point for free fall velocity is much greater than traveling speed on conveyor. Tobacco carpet thickness is inversely proportional to speed for a given flow rate. (2) Either front and/or back spray nozzles can be used to spray onto the falling tobacco. (3) spray nozzles are spaced across the tobacco carpet so that overlapping (double) spray is accomplished. (4) Quantity of reorder is controlled by quantity of water sprayed through nozzles. some external means to precisely control the quantity of water is employed (i.e. meter pumps, etc.). A feedback signal from a moisture meter could be employed to control the quantity of water used. (5) No fans are used to circulate moisture laden air through the tobacco. (6) Key to invention is the application of a mist at a point where the carpet is essentially one leaf thick. If a thicker carpet is employed, wetting of the top leaves will occur and result in possible mold growth or non-uniform moisture application.

Sarofeen
12-7-79 Disclosure received--inventors notified.
1-21-80 Assigned to Sarofeen.
2-80 PM data base search completed--results to inventors for review.

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944 PREPARATION OF MIXED MALONATE ESTERS 1000779449

E. Southwick/Chemical Research/Sanders/Osdene

Malonate esters useful as monomers for the preparation of flavor release agents.

Inskeep
12-12-79 Disclosure received--inventor notified.
1-21-80 Assigned to Inskeep.
3-25-80 Experimental work needed.

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Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

945 FLAVOR

S. Haut, R. Comes, M. Core/Chemical Research/Sanders/Osdene

Compound useful as a flavor additive much like WS-14.

Inskeep
12-79 Disclosure received--inventors notified.
1-21-80 Assigned to Inskeep.
3-11-80 Certain prior art cited to inventor.

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947 COOLING COMPOUND

F. DeBardeleben/Chemical Research/Sanders/Osdene

Hutcheson
10-79 Disclosure made informally to S. Hutcheson
1-80 Disclosure logged in--inventor notified.
1-21-80 Assigned to Hutcheson; inventor working on synthesis of compounds.
3-17-80 Memo to inventor asking him to supply information to TPI for search.

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948 APPARATUS FOR PRESSURE DROP MEASUREMENT OF FIBROUS ARTICLES

W. Nichols/Cigarette Development/Meyer

Blish
1-25-80 Disclosure received--inventor notified.
2-19-80 Assigned to Blish.

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949 RECOVERY OF TOBACCO FROM STEMMERY DISCARD BY ELECTROSTATIC SEPARATION

R. de la Burde, R. Mait, and F. Utsch/Tobacco Materials/Burns/Gannon

Palmer/Not Assigned
1-28-80 Disclosure received--inventors notified.

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1000794450

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

951 TREATMENT OF PRINTED CIGARETTE TIPPING PAPER

R. Armstrong/Analytical Research/Bourlas/Lowitz/Farone

The invention consists of the treatment of printed cigarette tipping paper with ozone or excited atomic or molecular species of oxygen or nitrogen or combinations thereof which are formed by electrical discharge spark or corona around a charged wire in proximity to the paper. The result of this treatment is to change the surface of the printed paper so that its reception of adhesives is enhanced and thereby improve the performance of the tipping paper in high speed cigarette manufacture.

Blish
2-11-80 Disclosure received—inventor notified.
2-19-80 Assigned to Blish.

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952 PORTABLE PROGRAMER SYSTEM

W. Smick/Manufacturing Engineering/Grollimund/Kay/Pasquine

Divided out of 892.

Sarofeen
2-18-80 Disclosure received—Kay notified.

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953 IMPROVED METHOD FOR SELECTIVE DENITRATION VIA ELECTRODIALYSIS

G. Keritsis/Tobacco Materials/Burns/Gannon

Palmer/Not Assigned
2-19-80 Disclosure received—inventor notified.

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1000729451

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

954 CIGARETTE MAKER MOISTURE AND TEMPERATURE CONTROL

J. Remington/Manufacturing Engineering/Kay/Pasquine

Object is to manipulate the dry bulb temperature and relative humidity of the air to obtain the desired moisture and temperature conditions of the tobacco in the maker.

Related to SN 111521.

Sarofeen
2-20-80 Disclosure received.
2-21-80 Memo to Kay requesting supplemental disclosure information.
2-27-80 Kay took back disclosure to add additional information.
3-31-80 In-house search completed.
4-11-80 Meeting with Engineering to discuss follow-up details.

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956 SKIP GAP BUM MONITOR

J. Wheless and W. Shields/Manufacturing Engineering/Taylor/Kay/Pasquine

Use of a custom designed strobe light that is used to measure the correct timing between the tipping machine gum roller and cork knives. This light is triggered from a timing disc that is directly attached to the cork knife gear. Hence, when the light is directed at the tipping paper surface that has just had glue applied, it will give you a snapshot of the glue pattern. By referencing this snapshot to some fixed pointer, it will tell you whether or not the glue pattern is properly aligned for the knife cut. This can, of course, be done while the machine is operating at high speed and hence no production time is lost.

Palmer/Not Assigned

3-28-80 Disclosure received--inventors notified.

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957 LOW COST ULTRALOW PRESSURE RELIEF VALVE

W. Sweeney/Manufacturing Engineering/Taylor/Kay/Pasquine

Palmer/Not Assigned
3-28-80 Disclosure received—inventor notified.

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1000794S2

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

958 DYNAMIC CIRCUMFERENCE GAUGE

C. Irving/Tobacco Services/Osmalov/Gannon

The invention uses strain gauges mounted a spring, of suitable spring constant, to detect the diameter of cigarettes. The change of diameter of the cigarettes causes a change in the voltage output of the strain gauges when a cigarette is passed between the spring and a suitable guideblock. This device can be used to measure the diameter of cigarettes dynamically, that is while they are being produced.

Blish
4-3-80 Disclosure received--inventor notified
4-80 Assigned to Blish.

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959 FLAVOR SYSTEM

J. Kang/Chemical Research/Sanders/Osdene

Inskeep
4-8-80 Disclosure received--inventor notified.
4-80 Assigned to Inskeep.
4-17-80 In-house search completed.

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960 FORMULATION OF A COLA-TYPE SOFT DRINK

A. Lendvay/S.D. Applications Laboratory/Will/Wakeham

Inskeep
4-8-80 Disclosure received--inventor notified.
4-80 Assigned to Inskeep.

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961 CIGARETTE PACKAGING

Manufacturing Engineering/Kay/Pasquine

Open-ended, semi-rigid outer sleeve for packaging cigarettes.

Palmer
4-16-80 Disclosure received from J. Kay--notified.
4-16-80 Search requested from outside firm.

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1000279453

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000

962 CARBONATED INSTANT SOFT DRINK

A. Lendvay/S.D. Applications Laboratory/Will/Wakeham

Palmer/Not Assigned
4-16-80 Disclosure received--inventor notified

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1000794S4

Source: https://www.industrydocuments.ucsf.edu/docs/pgdj0000